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FHWA, IVHS, and Privacy

Julie Dingle†

The Federal Highway Administration (FHWA) is pleased to sponsor this issue of the SANTA CLARA COMPUTER AND HIGH TECHNOLOGY LAW JOURNAL, which presents the results of the Santa Clara Symposium on Privacy and Intelligent Vehicle-Highway Systems (IVHS). The symposium is the centerpiece of a project, funded by a grant from the FHWA and carried out by the Santa Clara University School of Law, to analyze federal and state privacy laws as they relate to IVHS and to develop safeguards to protect privacy.

I. THE FEDERAL IVHS PROGRAM

This project is part of a multi-year program to research, develop, and operationally test intelligent vehicle-highway systems (which many are now calling intelligent transportation systems or ITS) and to promote the implementation of such systems as a component of the nation's surface transportation system. The program is authorized by the Intelligent Vehicle-Highway Systems Act of 1991.¹ Intelligent-vehicle highway systems are defined as the development or application of electronics, communications, or information processing (including advanced traffic management systems, commercial vehicle operations, advanced traveler information systems, commercial and advanced vehicle control systems, advanced public transportation systems, satellite vehicle tracking systems, and advanced vehicle communications systems) used singly or in combination to improve the efficiency and safety of surface transportation systems.² The goals of the program include:

- (1) the widespread implementation of intelligent-vehicle highway systems to enhance the transportation capacity, efficiency, and safety of the Federal-aid highway system and to serve as an alternative to building new roadways on the Federal-aid highway system;

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1. Pub. L. No. 102-240, 105 Stat. 2189 (codified at 23 U.S.C. § 307)[Hereinafter IVHS Act].

2. IVHS Act § 6059(1).

(2) the enhancement, through more efficient use of the Federal-aid highway system, of the efforts of the several States to attain air quality goals established pursuant to the Clean Air Act;

(3) the enhancement of safe and efficient operation of the Nation's highway systems with a particular emphasis on aspects of systems that will increase safety and identification of aspects of the system that may degrade safety;

(4) the development and promotion of intelligent vehicle-highway systems and an intelligent vehicle-highway systems industry in the United States, using authority provided under section 307 of title 23, United States Code;

(5) the reduction of societal, economic, and environmental costs associated with traffic congestion;

(6) the enhancement of United States industrial and economic competitiveness and productivity by improving the free flow of people and commerce and by establishing a significant United States presence in an emerging field of technology;

(7) the development of a technology base for intelligent vehicle-highway systems and the establishment of the capability to perform demonstration experiments, using existing national laboratory capabilities where appropriate; and

(8) the facilitation of the transfer of transportation technology from national laboratories to the private sector.³

In carrying out the program, Congress directed the Secretary of Transportation to maximize the involvement of the United States private sector, colleges and universities, and State and local governments in all aspects of the program, including design, operations, maintenance and evaluation.⁴ DOT cooperates with non-Federal organizations and individuals through such activities as sponsored research and development projects, operational test projects,⁵ advisory committees,⁶ public meetings,⁷ and by providing the opportunity for public notice and comment on many aspects of the program.⁸

3. *Id.* § 6052(b).

4. *Id.* § 6053(a).

5. Supplemental notice; request for participation, 58 Fed. Reg. 58,227 (1993); Notice; request for participation, 58 Fed. Reg. 47,310 (1993); Notice of interest areas; request for participation, 57 Fed. Reg. 32,047 (1992); Notice, 57 Fed. Reg. 19,959 (1992).

6. Notice of Public meeting, 59 Fed. Reg. 32,747 (1994); Notice of public meeting, 58 Fed. Reg. 18,297 (1993); Notice of establishment of advisory committee, 56 Fed. Reg. 9,400 (1991).

7. Notice; Request for participation in public forums for the development of an IVHS architecture, 59 Fed. Reg. 15,499 (1994).

8. Notice; request for public participation in the development of an IVHS national program plan, 58 Fed. Reg. 65,814 (1993); Notice; request for information regarding the development of a system architecture for a nationwide intelligent vehicle-highway system, 57 Fed. Reg. 39,054 (1992).

Congress recognized the potential significance of nontechnical constraints to implementation of the IVHS program and directed the Secretary to submit a report to Congress addressing nontechnical constraints, barriers or concerns, including privacy concerns, and to recommend legislative and administrative actions necessary to further the program.⁹ Congress also directed the Secretary to provide planning and technical assistance and information to State and local governments and to assist State and local officials in developing necessary laws pertaining to the establishment and implementation of IVHS.¹⁰

Within the Department, the FHWA is lead agency. The FHWA works closely with the Office of the Secretary of Transportation, the National Highway Traffic Safety Administration, the Federal Transit Administration, the Research and Special Programs Administration and other federal agencies in carrying out the IVHS program.

II. THE DEVELOPMENT OF THE PRIVACY LAW PROJECT

One of the FHWA's earliest activities in analyzing the legal constraints to IVHS was the commissioning of a paper to identify legal constraints experienced or anticipated by IVHS participants and to recommend further activities to analyze and manage those constraints.¹¹ The author predicted that to the extent access to IVHS-generated information undercuts the privacy which has traditionally been one of the great attractions of the private passenger vehicle, privacy problems may undercut user acceptance of the technology. His interviews with IVHS project participants also revealed uncertainty about the extent to which public records disclosure requirements would apply to IVHS information, particularly information generated through automatic toll collections. Although participants in early IVHS operational test projects did not view privacy issues as posing serious obstacles to future IVHS implementation, the author's research convinced him that privacy problems might be more serious than anticipated. To preserve privacy and to prevent a public backlash against the technology, he concluded that it would be important to plan ahead to manage privacy issues and to assure that in the original collection of data, some anonymity of the operator of a vehicle can be assured.

9. IVHS Act § 6054(d), 23 U.S.C. § 307 (Supp. IV 1992).

10. *Id.* at § 6055(a).

11. Kent Syverud, Final Report, Legal Constraints to the Research, Development and Deployment of IVHS Technology in the United States, FHWA Contract No. DTFH61-92-01229 (1993).

The next step in the development of the Department's IVHS legal issues program was to commission a set of papers to assist in the development of the Departmental report to Congress on nontechnical constraints to IVHS.¹² One of those papers addressed privacy issues.¹³ After conducting a policy and legal analysis of privacy issues raised by IVHS, the authors concluded that IVHS applications have enormous potential to improve traffic safety, enhance convenience, save fuel and reduce pollution but that some IVHS applications also threaten legitimate privacy interests. They concluded that it is likely that the public will weigh the potential IVHS benefits against the IVHS privacy threat. They concluded that it is also likely that the public will embrace or accept privacy-sensitive IVHS applications only if convinced that the benefits are real and that the privacy threats can be minimized through a comprehensive and effective privacy protection program.

In the Report,¹⁴ the Department concluded that IVHS technologies are less likely to be constrained because of concerns about the improper invasion of privacy when:

- The benefits of these technologies are clearly understood;
- The benefits are perceived as outweighing any adverse effects on privacy;
- It is perceived that the information will be properly protected; and
- Basic principles are followed to safeguard privacy.

In the report, the Department stated its commitment to being an active participant in discussions with members of the IVHS community on privacy issues. The report states that the Department will consider public sensitivity to the use of personal IVHS information and insist upon appropriate conduct in the handling of personal information.

The Santa Clara project was developed in response to an FHWA notice inviting grant applications.¹⁵ In the notice, the FHWA acknowledged the privacy implications of IVHS. While driving is a public behavior, the ability to compile information about an individual's driving behavior, travel patterns, toll payments and other travel

12. In addition to the papers, the Department relied upon materials developed by the ITS AMERICA membership and comments received in the public docket.

13. Robert Belair, Alan Westin, and John Mullenholz, *Privacy Implications Arising from Intelligent Vehicle-Highway Systems*, FHWA Contract No. DTFH61-93-C-00087(1993).

14. OFFICE OF THE SECRETARY, DEPARTMENT OF TRANSPORTATION, *Nontechnical Constraints and Barriers to Implementation of Intelligent Vehicle-Highway Systems*, (1994).

15. Notice inviting grant applications, 58 Fed. Reg. 29,444 (1993).

activity creates the potential for a database which has not previously existed in an easily accessible format. The FHWA recognized that IVHS generated information might be sought for purposes other than the limited purpose of operating the traffic management, electronic toll or other intelligent vehicle-highway system. Recognizing the importance of these issues, the FHWA expressed its interest in sponsoring research in support of the development of policies and guidelines for the implementation of IVHS technology as it concerns privacy and data security. The notice indicated that the research should be directed toward balancing the rights of individuals to control information about themselves with the legitimate need for accurate information by government and by private enterprise.

III. NEXT STEPS

In carrying out the IVHS program, the Department is attempting to identify emerging legal problems raised by IVHS technology and to address them early in the development of the technology. The Department has initiated a comprehensive program to investigate and address nontechnical issues such as privacy that could affect the development and implementation of IVHS. In addition to its research and public outreach programs, the Department will examine privacy issues in the development of the IVHS system architecture, in field operational tests of IVHS technologies and in the development of a prototype automated highway system.¹⁶ Specific privacy-related activities that will be undertaken by the Department in the near future include a public opinion survey on privacy issues and IVHS, an update to the Report to Congress on nontechnical constraints and consideration of privacy principles being developed by the Department's advisory committee, ITS AMERICA.

In addressing privacy issues, the Department will need to consider issues such as the proper role of the federal government in protecting privacy. Should compliance with some set of privacy rules be a condition of federal transportation funding? Should the government have a broader role in protecting individual privacy even if the technology is not supported with federal funds? What are the appropriate enforcement mechanisms? Should industry-specific rules be developed for IVHS, or will broader information privacy protections suffice?

The effect of IVHS technology on American's lives is likely to be widespread. The Department is trying to be inclusive of a wide

16. IVHS Act § 6054(b), 23 U.S.C. 307 (Supp. IV 1992).

range of viewpoints in developing approaches to privacy and other concerns raised by IVHS technology. This project, which involved the academic and the local community in Santa Clara, is part of that effort. The results of this project provide a valuable contribution to the discussion of IVHS privacy issues and the development of public policy in this regard.